May 11, 2006

M/V Klihyam Repower Project

EPA has reviewed the materials provided for this project. The following is a list of questions / requests for additional information required to complete our evaluation.

1. Attachment A, Section A. Trips Logs Summary:
   a. How were the distances of each jurisdiction determined?
      Answer: OceanAir plotted out the approximate location of the shipping lanes on a California map and then measured the distances off of each county shoreline.

2. Attachment A, Section E.1. Line Trip Hauls:
   a. A note is provided which states that the trip on Dec. 16 took 115 hours due to a weather delay.
      i. Please clarify if these 115 hours are included or excluded from the summary.
         Answer: The December 16 trip was included.
      ii. Were the engines operating at 97% load during all 115 hours?
         Answer: We believe that the engines were likely not operated at 97% during all 115 hours. However, the vessel emissions are based on total fuel usage and not hours of operation. The footnote was included as an explanation of an unusual event. If that weather delay had not occurred, there would have been one additional line haul trip in late 2005. Therefore, we believe that this weather event causes our baseline emissions estimate to be artificially low.
   b. What time period is covered for the trips listed on the table?
      Answer: All of 2005. However, consistent with EPA's suggestion below, we are revising the trip log summary to reflect March 10, 2005 through March 10, 2006.
   c. Should the trip listed in the table from Martinez to Richmond be listed with E.3., rather than E.1.?
      Answer: You are correct that there was an error with the table. The two trips referenced in the question were misidentified as "Martinez to Richmond." They should have been identified as "Martinez to Long Beach." This change will be corrected in our revised submittal.

3. Attachment C, faxed copy of Electro-motive diesel emissions data sheet:
   a. The date on the memo providing the emission data is 2/14/92, but the current engines were installed in 2004. It would seem that the emission data provided is out-of date.
      Answer: The engines in the Klihyam predate the 1992 emissions data and therefore we believe that use of the 1992 data is conservative. As noted on page 1 of the report, the port engine is

model year 1981 and the starboard engine is model year 1982 (model year for these engines is the first two digits of the serial number, e.g. the 81-H1-1055 is a 1981 engine). The M/V Klihyam was in dry dock in 2004 for refurbishment for exclusive use in the new line haul contract service that started in late 2004. That is the reason for the date on the M/V Klihyam data sheet included in the report. The engines are not 2004 engines. Therefore, we believe that the data provided is representative of the vessel emissions.

b. EPA notes that the engine model # supplied on the data sheet when the boat was built is EMD 16-645-**E6**; 1950 HP @ 900 rpm. This model number is not listed on the emission data sheet. Please provide a copy of the correct emission data sheet for the existing engines.

Answer: The basic engine is a 16-645-E. The number to the right of the "E" (i.e., "6" or "2") refers to the accessory placement. 16-645-E2 and 16-645-E6 engines are identical. The difference is whether the accessories (e.g., oil pump and cooling pump) are skid mounted (E6) or around the engine (E2). Therefore, the emission data sheet is representative of the current Klihyam engines.

4. Attachment D. Fuel Logs

Note: We assume this section of questions refers to Section D of Attachment A as Attachment D should be the Tier 2 Certificate of Conformity.

a. What is the fuel tank capacity of the tug boat?

Answer: The fuel tank capacity is 120,000 gallons.

b. Do any other engines on the boat share this fuel (i.e. auxiliary engines)?

Answer: Yes, the tank is shared by the auxiliary engines. The auxiliary engines are a very minor consumer of fuel (<2% of total) and so all fuel was considered to be consumed by the propulsion engines.

c. Is the fuel tank filled to capacity each time it is filled? If not, is there some standard target when refilling, e.g. 80-90% full?

Answer: Sause does not fill the tanks to capacity as the additional weight of unnecessary fuel increases engine load and fuel consumption. Therefore, they typically add 30,000 to 50,000 gallons per filling to maintain their fuel level.

d. To determine annual fuel usage, EPA suggests using the fuel data from 3/7/05 to 3/10/06.

Answer: We believe this is a good suggestion and will rework the calculations to match that time period.

e. The amount of fuel contained in the fuel tank on 3/10/06 should be deleted from the total fuel usage, as this amount represents a full tank, for which no travel has occurred.

Answer: We agree with the idea of measuring March 2005 to March 2006, however, we believe that the March 7, 2005 fuel should not be considered as that refueling event brings the tank up to its

normal fill level. The March 10, 2006 refill event returns the tank to its normal fill level. Therefore we believe that the fuel usage should reflect all of the refill events from April 8, 2005 through the fill event on March 10, 2006.

f. Please provide copies of all fuel receipts list in Attachment D.
Answer: These are being sent.

g. Please provide a copy of the fuel specification sheet for the fuel used.
Answer: This is being sent.